

**Notice of Allowability**

Application No.

10/629,585

Examiner

Tom V. Sheng

Applicant(s)

KASAI, TOSHIYUKI

Art Unit

2629

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 8/7/2006.
2. ☒ The allowed claim(s) is/are 1,3-10,12-18,21-24,26 and 27.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney/Agent Gang Luo on 8/22/2006.

#### In The Claims-

Claim 1, line 16, replace "elements" with --element--; and

line 21, replace "electro-optical" with --electronic--.

Claim 3, line 23, replace "electro-optical" with --electronic--.

Claim 4, line 23, replace "electro-optical" with --electronic--.

Claim 5, line 1, after "according", insert -- to--.

Claim 7, line 7, after "supplying", insert --, via a first device,--;

line 8, after "supplying", insert --, via a second device,--;

line 12, replace "," with --.--; and

delete lines 13-14.

Claim 15, line 7, after "supplying", insert --, via a first device,--;

line 8, after "is supplied to", replace "a" with --the--;

line 9, after "supplying", insert --, via a second device,--;

line 12, replace "," with --.--; and

delete lines 13-14.

Please cancel claims 19, 20 and 25.

***Allowable Subject Matter***

2. Claims 1, 3-10, 12-18, 21-24, 26 and 27 are allowed.
3. The following is an examiner's statement of reasons for allowance:

The invention is directed to an electro-optical display device capable of reducing power consumption. The invention includes a first driving voltage and a second driving voltage, are supplied to the source of a driving transistor. During a data writing period, the first driving voltage to be supplied to the driving transistor and is higher than the second driving voltage. During a light-emitting period, the second driving voltage supplied to the driving transistor, resulting in lower power consumption.

Independent claims 1, 3 and 4 identify the uniquely distinct features "said first driving voltage being higher than said second driving voltage, said first device supplying said first driving voltage at least in a period in which the electrical signal is supplied to the capacitor element by said first transistor, and said second device supplying said second driving voltage at least in a period in which the amount of electrical current corresponding to the conductive state is supplied to said electronic element via said second transistor."

Independent claim 7 identifies the uniquely distinct features "supplying, via a first device, a first driving voltage to said electronic circuit in a period in which the electrical signal is supplied to the capacitor element via said first transistor; and supplying, via a second device, a second driving voltage, which is lower than said first driving voltage, in

Art Unit: 2629

a period in which the amount of electrical current corresponding to the conductive state is supplied to said electronic element via said second transistor, the first driving voltage and the second driving voltage being supplied to one electrode of the capacitor element.”

Independent claims 10, 12 and 13 identify the uniquely distinct features “said first driving voltage being higher than said second driving voltage, said first device supplying said first driving voltage at least in a period in which the electrical signal is supplied to the capacitor element by said first transistor, and said second device supplying said second driving voltage at least in a period in which the amount of electrical current corresponding to the conductive state is supplied to said electro-optical element via said second transistor.”

Independent claim 15 identifies the uniquely distinct features “supplying, via a first device, a first driving voltage to said electro-optical device in a period in which the electrical signal is supplied to the capacitor element via said first transistor; and supplying, via a second device, a second driving voltage, which is lower than said first driving voltage, in a period in which the amount of electrical current corresponding to the conductive state is supplied to said electro-optical element via said second transistor, the first driving voltage and the second driving voltage being supplied to one electrode of the capacitor element.”

Akimoto et al. (US 2002/0196213 A1, hereinafter Akimoto) teaches a light-emitting type pixel comprising a switching transistor, a storage capacitor, a reset transistor, an inverter circuit of two inverting transistors, and an OLED. During the

Art Unit: 2629

writing period of each horizontal scanning period, the reset transistor is turned on the inverter circuit is reset to  $V_{rst}$ . During the driving period of the horizontal scanning period, the reset transistor is turned off and input voltage at inputs of the inverter circuit now determines the state of the OLED. The operations involving the two periods in each horizontal scanning period do not correspond to claimed operations and the use of two different driving voltages recited above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom V. Sheng whose telephone number is (571) 272-7684. The examiner can normally be reached on 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tom Sheng  
August 23, 2006

AMR A. AWAD  
PRIMARY EXAMINER  
